



October 10, 2017

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Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

**Re: *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services, et. al.*, GN Docket
 No. 14-177, IB Docket No. 15-256, WT Docket No. 10-112, and IB Docket No. 97-95**

Dear Ms. Dortch:

On October 6, 2017, EchoStar Satellite Operating Corporation and Hughes Network Systems, LLC (collectively “EchoStar”) met with Rachael Bender, Legal Advisor to Chairman Pai. EchoStar was represented by Jennifer A. Manner and outside counsel, William Wiltshire, of Harris Wiltshire & Grannis LLP.

In the meeting, the parties discussed EchoStar’s proposals and concerns in the above-referenced proceeding as reflected in the attached talking points, which were distributed at the meeting.

Pursuant to the Commission’s rules, this notice is being filed in the above-referenced dockets for inclusion in the public record. Please contact me should you have any questions.

Respectfully submitted,

/s/ Jennifer A. Manner

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Attachment

cc: Rachael Bender



THE COMMISSION SHOULD ADOPT RULES THAT PERMIT EQUITABLE USE OF MILLIMETER WAVE SPECTRUM BY FIXED SATELLITE SERVICE OPERATORS AND UMFUS LICENSEES

Satellite operators have already begun developing the spectrum above 24 GHz to meet the growing demand of U.S. customers for broadband services. Throughout this proceeding, EchoStar has proposed rules for deployment of Fixed Satellite Service (FSS) earth stations in this spectrum designed to facilitate intensive and equitable use by 5G platforms in the FSS and the Upper Microwave Flexible Use Service (UMFUS), ensuring both services have sufficient access to the scarce spectrum resources they need.

On Reconsideration:

- In order to ensure the most efficient use of spectrum, the FCC should revise the conditions recently adopted for deployment of FSS earth stations in the 27.5-28.35 GHz (28 GHz) and 37.5-40.0 GHz (39 GHz) bands as follows:
 1. ***Adopt a revised population coverage limit for FSS earth stations in the 28 GHz and 39 GHz bands.***
 - The current rule limits FSS earth stations to aggregate coverage of 0.1% of population in a UMFUS license area.
 - This may have the perverse effect of driving earth station deployment in *more populated areas*.
 - By adopting a sliding scale (with allowed coverage increasing as population density decreases), the FCC would create a framework that encourages FSS operators to site their earth stations in areas that are likely to be of lower value to UMFUS operators.
 2. ***Better define the transient population limits.***
 - The current rule restricts FSS earth station deployment near areas where people gather on a transient basis. However, the rule does not define the relevant terms.
 - This undermines regulatory certainty, could severely restrict FSS deployment, and also lead to absurd results. If such limits are to be retained, the relevant terms should be defined as follows:
 - “Major event venue” should be defined as one with a capacity of 10,000 or more. This would cover all NFL/MLB/NBA/NHL venues, and major college venues as well.
 - “Arterial street, interstate or U.S. highway” should include only principal arterials as defined by the Department of Transportation’s classification system.
 - “Passenger railroad” should be defined as railroad track operated by Amtrak, which covers over 21,000 miles of track.
 - “Cruise ship port” should apply to the fifteen largest ports in the United States, which handle almost 90% of all cruise ship passenger departures in North America.
 - In addition, “urban mass transit route” should be eliminated as duplicative, as such routes typically follow principal arterial roads, share track with Amtrak, or serve highly populated areas.

3. *Eliminate the rules limiting FSS operators to three earth stations in any given county (for 28 GHz) or Partial Economic Area (for 39 GHz).*

- These rules prevent FSS operators from locating multiple earth station facilities in areas with little or no impact on UMFUS, and are redundant in light of other restrictions.

4. *Apply the 70/80/90 GHz Band Database Approach to UMFUS Facilities.*

- This would provide a streamlined way for FSS operators to identify areas of minimal UMFUS deployment for use by earth stations, while obviating the need for UMFUS operators to respond to numerous requests for coordination.

Further Notice:

- The V-band spectrum at issue here is critical to the growth of next-generation, high-throughput broadband satellite systems. GSO and NGSO FSS operators are actively pursuing expansion opportunities in these bands, and must continue to have reliable access to them if they are to provide the ubiquitous connectivity that will promote national prosperity and help close the digital divide. Accordingly, the Commission should:

1. *Continue to reserve the 48.2-50.2 GHz uplink band (and corresponding 40.0-42.0 GHz downlink band) as exclusive for FSS, to support user terminal deployment.*

- The FCC has designated these band segments exclusively for FSS uplinks and downlinks. In making that designation, the FCC found that “spectrum designated exclusively for FSS will ultimately permit more effective deployment of satellite systems than does the current shared allocation scheme.”
- These are two of the only slices of spectrum in which satellite operators can deploy user terminals on a widespread basis with full protection against interference from other services.

2. *Optimize FSS access to the 47.2-48.2, 50.4-51.4 and 51.4-52.4 GHz bands, for deployment of individually-licensed earth stations.*

- The combination of UMFUS densification targeting urban core areas with relatively limited deployment of individually-licensed earth stations that will have small impact zones creates the opportunity to adopt rules that will allow both UMFUS and FSS operators to deploy meaningfully in these greenfield bands.
- The FCC should preserve the co-primary status of FSS and UMFUS in the 47 GHz band and lower portion of the 50 GHz band, with spectrum sharing rules that build upon the prior proposal of AT&T and EchoStar that prioritizes UMFUS in the urban core areas while establishing coordination rules in other areas where individually-licensed FSS earth stations will not materially affect UMFUS deployment.
- Because the 51.4-52.4 GHz band is currently subject to a petition for rulemaking domestically and technical studies internationally that could affect its allocation, await the conclusion of those processes before adopting any rules for that spectrum.



3. Allow FSS satellites in the 37.5-40 GHz band to operate at higher power flux-density levels in order to compensate for rain-fade conditions.

- The FCC should implement its existing rule that authorizes FSS space stations to operate in this band at higher PFD levels (consistent with the levels allowed internationally) when necessary to overcome atmospheric interference. After thirteen years, it is time to put this rule into effect.

EchoStar eagerly anticipates being part of the 5G ecosystem and playing its part in delivering advanced broadband services to consumers across the U.S., including those in rural and other underserved areas. We believe that the proposals discussed today will unleash satellite operators to achieve these goals while imposing no more than minimal constraints on UMFUS deployment.